

### Abstract

The present invention provides an encoder and a decoder of digital picture data, and the encoder/decoder can realize high precision transform with less quantity of transferred data, when a parameter of the digital picture data is not an integer but has numbers of digits, to which the Affine transformation can be applicable. The encoder/decoder comprises the following elements:

- (a) picture compression means for encoding an input picture and compressing the data,
- 10 (b) coordinates transform means for outputting coordinate data which is obtained by decoding the compressed data and transforming the decoded data into a coordinate system,
- (c) transformation parameter producing means for producing transformation parameters from the coordinates data,
- 15 (d) predicted picture producing means for producing predicted picture from the input picture by the transformation parameter, and
- (e) transmission means for transmitting the compressed picture and the coordinates data.